

International Application No. PCT/SE03/00853

Title: A DEVICE FOR CLEANING THE TEATS OF AN ANIMAL AND A MILKING STALL
INCLUDING THE DEVICE

Preliminary Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A device for cleaning the teats of an animal, including at least one first conduit member (1) and at least one teat-cleaning member (2), which is connectable via the first conduit member (1) ~~is connectable~~ to a central arrangement (3) for supplying cleaning liquid and discharging waste liquid, ~~characterized in that~~ wherein:

the teat-cleaning member (2) includes at least two teat-cleaning cups (5) to be applied to a respective teat of the animal, a conduit assembly (6) and two second conduit member (7) extending between a respective one of the teat-cleaning cups (5) and the conduit assembly (6), and wherein ~~that~~ each teat-cleaning cup (5) is connected to the central arrangement (3) via the respective second conduit member (7) and the first conduit members (1) for ~~said~~ supplying of cleaning liquid and providing for ~~said discharge~~ discharging of waste liquid.
2. (Currently amended) A device according to claim 1, ~~characterised in that~~ wherein the central arrangement (3) is arranged to discharge the waste liquid by applying a pressure significantly lower than the atmospheric pressure to the teat-cleaning cups (5) via the conduit members (1, 7).
3. (Currently amended) A device according to ~~any one of claims 1 and 2, characterised in that~~ claim 1, wherein each conduit member (1, 7) includes a supply conduit (~~11, 13~~) for the

supply of the cleaning liquid to ~~said~~ teat-cleaning cup (5), and a discharge conduit (~~12, 14~~)

for the discharge of waste liquid from ~~said~~ teat-cleaning cup (5).

4. (Currently amended) A device according to ~~claims 2 and 3, characterised in that~~ claim 2,
wherein the central arrangement (3) is arranged to perform the supplying of cleaning liquid
and the ~~discharge~~ discharging of waste liquid simultaneously.
5. (Currently amended) A device according to ~~any one of the preceding claims characterised~~
~~in that~~ claim 1, wherein the conduit assembly includes a connection member (6'), which
connects each second conduit member (7) to the first conduit member (1).
6. (Currently amended) A device according to ~~claims 3 and 5, characterised in that~~ claim 3,
wherein the supply conduit (~~13~~) of each second conduit member (7) is connected to the
supply conduit (11) of the first conduit member (1), and that the discharge conduit (~~14~~) of
each second conduit member (7) is connected to the discharge conduit (12) of the first
conduit member (1).
7. (Currently amended) A device according to ~~any one of claims 1-4, characterised in that~~ claim
1, wherein the conduit assembly includes a connection member arranged to hold the conduit
members (1, 7) together.
8. (Currently amended) A device according to ~~any one of the preceding claims, characterised~~
~~in that~~ claim 5, wherein the teat-cleaning member (2) includes a casing (30) enclosing the
connection member (6') and having a first opening (31) for the passage of the first conduit

member (1) and at least two second openings (32) for the passage of a respective one of the second conduit members (7).

9. (Currently amended) A device according to ~~any one of the preceding claims, characterised in that claim 1, wherein~~ each second conduit member (7) is relatively rigid permitting the second conduit member (7) and the associated teat-cleaning cup (5) to extend in an upward direction (x).
10. (Currently amended) A device according to ~~any one of the preceding claims, characterised in that claim 1, wherein~~ the teat-cleaning member (2) includes a grip member (33) permitting holding of the teat-cleaning member.
11. (Currently amended) A device according to ~~claims 8 and 10, characterised in that claim 8, wherein the teat-cleaning member includes a grip member permitting holding of the teat-cleaning member and wherein~~ the grip member is provided on the casing (30).
12. (Currently amended) A device according to ~~any one of the preceding claims, characterised in that claim 1, wherein~~ the device includes a carrying arrangement (40) for carrying the teat-cleaning member (2).
13. (Currently amended) A device according to claim 12, ~~characterised in that wherein~~ the carrying arrangement is adapted to permit the teat-cleaning member (2) to be movable.
14. (Currently amended) A device according to claim 13, ~~characterised in that wherein~~ the teat-cleaning member (2) is movable between at least an inactive position (A) beside the animal to be cleaned and an active position (B) beneath the teats of the animal.

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15. (Currently amended) A device according to ~~any one of claims 12 to 14, characterised in that~~
claim 12, wherein the carrying arrangement is adapted to permit the teat-cleaning member
(2) to be attached to the animal and to follow the animal during a movement of the animal.
16. (Currently amended) A device according to ~~any one of claims 14 and 15, characterised in that~~
claim 14, wherein the carrying arrangement includes a support arm[,] which carries the teat-
cleaning member and is movable in such way that ~~said~~ positions of the teat-cleaning member
are reachable.
17. (Currently amended) A device according to ~~any one of claims 12 to 15, characterised in that~~
claim 12, wherein the carrying arrangement (40) includes at least one rail (41) and a carriage
(42) movable along the rail (41), wherein the teat-cleaning (2) member is suspended in from
the carriage (42) via a wire-like member (44).
18. (Currently amended) A device according to claim 17, ~~characterised in that~~ wherein the
carrying arrangement (40) includes at least one holding member (46) for holding the first
conduit member (1) along the wire-like member (44) and the carriage (42).
19. (Currently amended) A device according to claim 18, ~~characterised in that~~ wherein said
holding member (46) forms an open passage through which the first conduit member (1) is
movable.
20. (Currently amended) A device according to ~~any one of claims 17 to 19, characterised in that~~
claim 17, wherein the device includes a balancing member (48) enabling the teat-cleaning

member (2) to be raised and lowered by the application of a force smaller than the gravity force of the teat-cleaning member (2) proper.

21. (Currently amended) A device according to claim 20, ~~characterised in that~~ wherein the balancing member (48) is provided on the carriage (42).
22. (Currently amended) A device according to ~~any one of claims 20 to 21, characterised in that~~ claim 20, wherein the balancing member (48) is arranged to collect the wire-like member (44).
23. (Currently amended) A device according to ~~any one of the preceding claims, characterised in that~~ claim 1, wherein each teat-cleaning cup (2) includes a lower end (52), an upper end (53) and an inner space (54), the upper end defining an opening (55) for the introduction of the teat to be cleaned into the inner space.
24. (Currently amended) A device according to claim 23, ~~characterised in that~~ wherein each teat-cleaning cup (5) includes a flexible lip (60) extending around the opening (55) and inwardly towards a ~~centre~~ center of the opening in order to abut tightly the teat introduced into the inner space (54) of the teat-cleaning cup (5).
25. (Currently amended) A device according to claim 24, ~~characterised in that~~ wherein the lip (60) slopes downwards towards the ~~centre~~ center of the opening (55).
26. (Currently amended) A device according to ~~any one of the preceding claims, characterised in that~~ claim 1, wherein the teat-cleaning device includes a retracting member (70) arranged

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for retracting the teat-cleaning member from the teats of the animal after the cleaning operation is finished.

27. (Currently amended) A milking stall including a device according to ~~any one of the preceding claims~~ claim 1.
28. (Currently amended) A milking stall according to claim 26, ~~characterised in that~~ wherein the milking stall includes a number of milking boxes, each being adapted to receive one animal.
29. (Currently amended) A milking stall according to claim 28, ~~characterised in that~~ wherein the milking boxes are arranged such that the milking stall is configured as one of a herringbone milking parlour, a tandem milking parlour, a parallel milking parlour and a rotary milking parlour.
30. (Currently amended) A milking stall according to ~~any one of claims 27 to 29~~, ~~characterised in that~~ claim 27, wherein the milking stall includes a milking machine having a number of teatcups to be attached to the teats of the animal to be milked, and an apparatus for automatic attachment of the teatcups to the teats of the animal.